

for the SPE  
reference

### REMARKS

This paper responds to the Office Action mailed on February 25, 2004.

Claims 10, 13, 17, 25, 33, 34, 38, 40 are amended, claims 39, 41 are canceled without prejudice or disclaimer, and no claims are added; as a result, claims 10-38 and 40 are now pending in this application.

#### §102 Rejection of the Claims

Claims 38-41 were rejected under 35 USC § 102(b) as being anticipated by Grubisich et al. (U.S. Patent No. 5,581,115). Applicant respectfully traverses.

First, applicant submits that the Office Action fails to state a *prima facie* case of obviousness. MPEP 2182 and 2183 require the Office Action to carry the initial burden of proof for showing that the prior art structure, material, or acts described in the specification which has been identified as corresponding to the claimed means plus function. Moreover, the Office Action has not provided an explanation or a rationale as to why Grubisich shows an equivalent to the corresponding elements disclosed in the present specification. As a *prima facie* case on anticipation has not been made, applicant requests allowance of claims 38 and 40.

Second, applicant clarifies claims 38 and 40. Claim 38 now more clearly recites features not found in Grubisich. Claim 38 recites, in part, “the means includes a region in contact with the collector and the base, the region including a first surface in contact with the base and a second surface in contact with the collector, the first surface being larger than the emitter-base surface.” Claim 40 recites, in part, “the means includes a region in contact with the collector and the base, the region including a first surface in contact with the base and a second surface in contact with the collector, the first surface being larger than the emitter-base surface.” Applicant can not find these features in Grubisich. Allowance of claims 38 and 40 is requested.

#### §103 Rejection of the Claims

Claims 10-37 were rejected under 35 USC § 103(a) as being unpatentable over Grubisich et al. Applicant respectfully traverses.

First, the undersigned requests clarification of this rejection to clarify issues for appeal. The Office Action on page 2 switches from a 35 USC § 103 rejection to a rejection under 35 USC § 102(b). Applicant request that if the application is not allowed in the next action that the action indicate the proper basis for rejection in Title 35.

Second, the Office Action admits that Grubisich does not expressly disclose the top surface are of region 88 is greater than that of the emitter. Applicant respectfully traverses the single reference rejection under 35 U.S.C. § 103 since not all of the recited elements of the claims are found Grubisich. Since all the elements of the claim are not found in the reference, Applicant assumes that the Examiner is taking official notice of the missing elements. Applicant respectfully objects to the taking of official notice with a single reference obviousness rejection and, pursuant to M.P.E.P. § 2144.03, Applicant respectfully traverses the assertion of Official Notice and requests that the Examiner cite references in support of this position.

Third, the Office Action states that it would have been obvious to one of ordinary skill in the art at the time of the invention to change the top surface area of the region 88, since such a modification would have involved a change in the size of a component. Applicant strongly disagrees with this statement. The presently claimed subject matter involves more than a mere change in size of a component. A new method was invented to fabricate the presently claimed structure, see parent application nos. 08/519,817 and 09/436,306, now patent nos. 5,719,082 and 6,440,812, respectively. Moreover, the inventor was required to recognize the problems in then current structures, e.g., those discussed on pages 1 and 2 of the present specification and invent a solution to these problems. Determining the size of the top surface of the implant region to address problems at the time of the invention was not merely changing size as asserted in the Office Action.

Claim 10 recites, in part, an emitter on top of the base region and having a surface area, which is in contact with the base region, smaller than the surface area of the base region; and an implant area of the collector region vertically adjacent to the base region having an increased collector doping of an implanted impurity, the implant area having an effective surface area, which is in contact with the base region, greater than the surface area of the emitter and less than the surface area of the base region.” Applicant can not find these features in Grubisich. Accordingly, applicant requests allowance of claim 10 and its dependent claims.

Claim 13 recites, in part, “the implant region . . . having an effective surface area greater than the surface area of the emitter region and less than the area of the base region contiguous to the collector region, wherein the effective surface area is in contact with the base region. Applicant can not find these features in Grubisich. Accordingly, applicant requests allowance of claim 13 and its dependent claims.

Claim 17 recites, in part, “the implant region having an increased doping of an implant impurity and having an effective surface area greater than the surface area of the emitter region contiguous to the base region and less than the area of the base region contiguous to the collector region.” Applicant can not find these features in Grubisich. Accordingly, applicant requests allowance of claim 17 and its dependent claims.

Claim 25 recites, in part, “the implant region having an implant surface area in contact with the base, the implant surface area being greater than the emitter surface area and less than the base surface area.” Applicant can not find these features in Grubisich. Accordingly, applicant requests allowance of claim 25 and its dependent claims.

Claim 30 recites, in part, “the area of the collector region having an effective surface area in contact with the base region that is greater than the surface area of the emitter.” Applicant can not find these features in Grubisich. Accordingly, applicant requests allowance of claim 30 and its dependent claims.

Claim 33 recites, in part, “the implant area having an effective surface area that is in contact with the base region, greater than the surface area of the emitter region and less than the surface area of the base region.” Applicant can not find these features in Grubisich. Accordingly, applicant requests allowance of claim 33.

Claim 34 is believed to be allowable for at least substantially similar reasons as stated above with regard to claim 25. Accordingly, applicant requests allowance of claim 34 and its dependent claims.

Applicant further incorporates by reference the prior response to preserve all issues for appeal.

CONCLUSION

Applicant respectfully submits that the claims are in condition for allowance and notification to that effect is earnestly requested. The Examiner is invited to telephone Applicant's attorney (612) 349-9587 to facilitate prosecution of this application.

If necessary, please charge any additional fees or credit overpayment to Deposit Account No. 19-0743.

Respectfully submitted,

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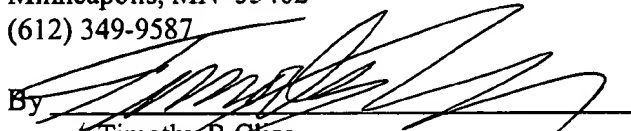
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Date

26 April '04

By

  
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CERTIFICATE UNDER 37 CFR 1.8: The undersigned hereby certifies that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail, in an envelope addressed to: Mail Stop AF, Commissioner of Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on this 24 day of April, 2004.

Name

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Signature

Z. L. L.